IN THE SPECIFICATION

Please replace the paragraph beginning on page 3, line 1 with the following:

At least one opening is formed in the insulating layer. A conformal transparent ~~reflective~~ electrode is formed on a sidewall and a bottom of the opening and a reflective electrode is formed on part of the insulating layer~~, wherein the reflective electrode has at least one opaque portion and at least one transparent portion, and the transparent portion of the reflective electrode is located in the opening~~. At least one protruding element is formed on the insulating layer located around the reflective electrode. A conformal first alignment film is formed on the reflective electrode and the protruding element. A common electrode is formed on an inner surface of the second substrate. A second alignment film is formed on the common electrode. Negative type liquid crystal molecules added with a chiral agent are filled in a space between the first substrate and the second substrate to form a liquid crystal layer.

The present invention improves on the prior art in that an asymmetric electric field can be induced at the fringe portion of the reflective electrode and the opening is located in the transparent electrode ~~portion of the reflective electrode~~, which allows negative type liquid crystal molecules added with a chiral agent to tilt and have different molecular alignment when an electric field above a threshold value is present. Moreover, the protrusion formed around the reflective electrode can enhance molecules to tilt. Thus, a continuous domain is formed in a pixel, thereby increasing the viewing angle of a transflective LCD.

Please replace the paragraph beginning on page 2, line 25 with the following:

In order to achieve these objects, the present invention provides a method of forming a transflective liquid crystal display device with a wide-viewing angle. A first substrate and a second substrate opposite the first substrate are provided. An insulating layer having an uneven surface is formed on the first substrate. At least one opening is formed in the insulating layer. A conformal ~~reflective~~ pixel electrode is formed on a sidewall and a bottom of the opening and part of the insulating layer, wherein the ~~reflective~~ pixel electrode has at least one opaque (reflective) portion (hereinafter "reflective electrode"), and at least one transparent portion (hereinafter "transparent electrode") ~~and the transparent portion of the reflective electrode is~~ located in the opening. At least one protruding element is formed on the insulating layer located around the reflective electrode. A conformal first alignment film is formed on the reflective electrode and the protruding element. A common electrode is formed on an inner surface of the second substrate. A second alignment film is formed on the common electrode. Negative type liquid crystal molecules added with a chiral agent are filled in a space between the first substrate and the second substrate to form a liquid crystal layer.

Please replace the paragraph beginning on page 3, line 18 with the following:

The present invention improves on the prior art in that an asymmetric electric field can be induced at the fringe portion of the reflective electrode and the ~~opening is located in the~~ transparent ~~portion of the reflective~~ electrode is located in the opening,

which allows negative type liquid crystal molecules added with a chiral agent to tilt and have different molecular alignment when an electric field above a threshold value is present. Moreover, the protrusion formed around the reflective electrode can enhance molecules to tilt. Thus, a continuous domain is formed in a pixel, thereby increasing the viewing angle of a transflective LCD.

Please replace the paragraph beginning on page 5, line 20 with the following:

In Figs. 1A and 1B, a conformal ~~reflective~~ pixel electrode 130 is formed on a sidewall and a bottom of the opening 120 and part of the insulating layer 110, wherein the ~~reflective~~ pixel electrode 130 has at least one opaque portion (which is a relective electrode) 132 and at least one transparent portion (or transparent electrode) 134. The transparent ~~portion~~ electrode 134 ~~of the reflective electrode 130~~ is located in the opening 120. The ~~opaque portion 132 of the~~ reflective electrode ~~130~~ 132 can be an aluminum layer formed by sputtering, and the transparent ~~portion~~ electrode 134 ~~of the reflective electrode 130~~ can be an ITO (indium tin oxide) layer or an IZO (indium zinc oxide) formed by sputtering. As a demonstrative example, a layer of ITO is formed in the transparent ~~portion~~ electrode 134 before or after forming a layer of aluminum in the ~~opaque portion~~ reflective electrode 132. The ITO layer (serving as ~~a~~ the transparent electrode) is connected to the Al layer (serving as ~~an opaque~~ the reflective electrode) and functions to apply a pixel voltage at the transparent ~~portion~~ electrode 134.

Please replace the paragraph beginning on page 6, line 7 with the following:

In Figs. 1A and 1B, a conformal first alignment film 140 is formed on the ~~reflective~~ pixel electrode 130. It should be noted that it is not necessary to perform a rubbing treatment on the first alignment film 140.

Please replace the paragraph beginning on page 6, line 22 with the following:

In Fig. 1A, when no pixel voltage (V) is present (or applied) or the pixel voltage is lower than a threshold value, the negative type liquid crystal molecules 152 are vertically aligned between the substrates 100 and 180 constituting the liquid crystal layer 150, thereby being a Normally Black state and enhancing the contrast in the reflective mode. In addition, the chiral agent makes the negative type liquid crystal molecules 152 have a twisting light property during an electric field is present, as shown as Fig. 1B. Moreover, the chiral agent causes the negative type liquid crystal molecules 152 to be stably disposed on the uneven surface of the reflective electrode ~~130~~ 132.

Please replace the paragraph beginning on page 7, line 4 with the following:

Fig. 1B shows the state of the negative type liquid crystal molecules inside the LCD when a pixel voltage (V) above a threshold value is applied between the ~~reflective~~ pixel electrode 130 and the common electrode 170. Since the periphery of the ~~reflective~~ pixel electrode 130 has a section (or drop), an asymmetric electric field 190 occurs at a

fringe portion of the ~~reflective~~ pixel electrode 130. The asymmetric electric field 190 allows the negative type liquid crystal molecules 152 added with the chiral agent to tilt and have different molecular alignment. Also, the negative type liquid crystal molecules 152 added with the chiral agent located around the opening 120 tilt toward the middle portion of the opening 120 due to a physical force (gravity effect). Hence, within the same pixel of the transflective LCD according to the invention, the molecules 152 have different molecular alignment (that is, many domains) so that the viewing angle of the transflective LCD is increased.

Please replace the paragraph beginning on page 7, line 20 with the following:

As shown in Fig. 3, a single pixel structure 330 has a gate line 310 and a data line 320 around the periphery of a reflective area 340 including a transmissive area 350, wherein the reflective area 340 corresponds to the ~~opaque portion~~ reflective electrode 132 in Fig. 1B and the transmissive area 350 corresponds to the transparent ~~portion~~ electrode 134 in Fig. 1B. Orientation of the liquid crystal molecules 152 inside each pixel changes to display an image by employing an active device (such as a thin film transistor, not shown). In Fig. 3, the liquid crystal molecules 152 added with chiral agent according to the invention has a twisting light property and a continuous domain having different molecular alignment, thereby increasing the viewing angle of the transflective LCD.

Please replace the paragraph beginning on page 8, line 24 with the following:

In Figs. 2A and 2B, a conformal ~~reflective~~ pixel electrode 130 is formed on a sidewall and a bottom of the opening 120 and part of the insulating layer 110, wherein the ~~reflective~~ pixel electrode 130 has at least one opaque portion (reflective electrode) 132 and at least one transparent portion (transparent electrode) 134. The transparent ~~portion~~ electrode 134 ~~of the reflective electrode 130~~ is located in the opening 120. The ~~opaque portion 132 of the~~ reflective electrode ~~130~~ 132 can be an aluminum layer formed by sputtering, and the transparent ~~portion 134 of the reflective~~ electrode ~~130~~ 132 can be an ITO (indium tin oxide) or IZO (indium zinc oxide) layer formed by sputtering. As a demonstrative example, a layer of ITO (serving as ~~a~~ the transparent electrode~~) is formed in the transparent portion~~ 134 before or after forming a layer of Al ~~in the opaque portion~~ to be the reflective electrode 132. The ITO layer is connected to the Al layer and functions to apply a pixel voltage at the transparent ~~portion~~ electrode 134.

Please replace the paragraph beginning on page 9, line 12 with the following:

In Figs. 2A and 2B, at least one symmetric protruding element 210 is formed on the insulating layer 110 located around the periphery of the ~~reflective~~ pixel electrode 130. The symmetric protruding element 210 preferably has a triangular cross-section.

Please replace the paragraph beginning on page 9, line 17 with the following:

In Figs. 2A and 2B, a conformal first alignment film 140 is formed on the ~~reflective~~

pixel electrode 130 and the symmetric protruding element 210. It should be noted that it is not necessary to perform a rubbing treatment on the first alignment film 140.

Please replace the paragraph beginning on page 10, line 20 with the following:

In Fig. 2A, when no pixel voltage (V) is present (or applied) or the pixel voltage is lower than a threshold value, the negative type liquid crystal molecules 152 are vertically aligned between the substrates 100 and 180 constituting the liquid crystal layer 150, thereby a Normal Black state occurs enhancing the contrast in the reflective mode. In addition, the chiral agent causes the negative type liquid crystal molecules 152 to have a twisting light property when an electric field is present, as shown as Fig. 2B. Moreover, the chiral agent causes the negative type liquid crystal molecules 152 to be stably disposed on the uneven surface of the reflective electrode ~~130~~ 132.

Please replace the paragraph beginning on page 10, line 15 with the following:

Fig. 2B shows the state of the negative type liquid crystal molecules inside the LCD when a pixel voltage (V) above a threshold value is applied between the ~~reflective~~ pixel electrode 130 and the common electrode 170. Since the periphery of the ~~reflective~~ pixel electrode 130 has a section (or drop) and a protrusion 210, an asymmetric electric field 190 occurs at a fringe portion of the ~~reflective~~ pixel electrode 130. The asymmetric electric field 190 allows the negative type liquid crystal molecules 152 added with the chiral agent to tilt and have different molecular alignment. Moreover,

the liquid crystal molecules 152 near the protrusion 210 are tilted in a specific direction due to the local effect of the protrusion 210. Also, the negative type liquid crystal molecules 152 added with the chiral agent located around the opening 120 tilt toward the middle portion of the opening 120 due to a physical force of gravity. Hence, within the same pixel of the transflective LCD according to the invention, the molecules 152 have different molecular alignment (that is, many domains) so that the viewing angle of the transflective LCD is increased.

Please replace the paragraph beginning on page 11, line 4 with the following:

As shown in Fig. 3, a single pixel structure 330 has a gate line 310 and a data line 320 around the periphery of a reflective area 340 including a transmissive area 350, wherein the reflective area 340 corresponds to the ~~opaque portion~~ reflective electrode 132 in Fig. 2B and the transmissive area 350 corresponds to the transparent ~~portion~~ electrode 134 in Fig. 2B. Orientation of the liquid crystal molecules 152 inside each pixel changes to display an image by employing an active device (such as a thin film transistor, not shown). In Fig. 3, the liquid crystal molecules 152 added with chiral agent according to the invention has a twisting light property and a continuous domain having different molecular alignment, thereby increasing the viewing angle of the transflective LCD.

Please replace the paragraph beginning on page 11, line 17 with the following:

Thus, the present invention provides a method of forming a transflective liquid crystal display device with a wide-viewing angle. The present method utilizes an asymmetric electric field occurring at the fringe portion of the ~~reflective~~ pixel electrode and the opening located at the transparent ~~portion of the reflective~~ electrode, causing the negative type liquid crystal molecules added with a chiral agent to tilt and have different molecular alignment. Moreover, the protrusion formed around the ~~reflective~~ pixel electrode enhances molecule tilt. Thus, a continuous domain is formed in each pixel, thereby widening the viewing angle of a transflective LCD.